EXECUTIVE SUMMARY

A business case is typically developed to identify the most desirable investment solution for a business need.

This business case was developed to examine whether or not it would be economically feasible and cost effective for the Department of Energy to establish and invest in a corporate technology-supported learning program; a program that would provide for the delivery of cross-cutting education and training activities via advanced training technologies such as: interactive television (ITV), multimedia (MM), computer-based training (CBT), and Internet and web-based training. The use of technology-supported learning is expected to gradually increase over the next 5 years as overall awareness of the potential cost-effectiveness of technology-supported learning increases.

Initially, the business case development effort was undertaken by the Training and Information Management communities of interest in response to budget cuts and strategic alignment implementation plans that called for a corporate approach to training, integration of information management, and reduced travel. Later, it was learned that the business case also begins to satisfy Congressional mandates in the Information Technology Management Reform Act (ITMRA), enacted in 1996.

The business case was designed to require development of a Departmental baseline (status quo), performance of a needs assessment and gap analysis, selection of proposed alternative solutions, analysis of the benefits and costs of each alternative, comparison of return on investment data, and development of recommendations. Departmentwide representatives from Headquarters, Field Organizations, and Laboratories provided developmental data through a structured set of strategic information management (SIM) workshops, and through surveys, questionnaires, telephone contacts, and various data analyses and review efforts.

The baseline effort confirmed that the Department is currently using a non-corporate approach to education and training. A non-corporate approach is one in which organizations make independent decisions about education and training development, delivery, and funding for their personnel. The baseline effort confirmed that 85 percent of the education and training in the Department (Federal and contractor) is currently delivered in traditional settings such as the classroom with the remaining 15 percent being delivered via advanced training technologies. By establishing an education and training baseline, the Department is well-positioned to begin performance measurement activities (e.g., measure cost savings, successes, benefits).

Through a needs assessment effort both current and future education and training needs were identified for Departmentwide customers. A gap analysis indicated that many education and training activities have cross-cutting applicability and would be appropriate for delivery using advanced training technologies. An analysis of industry best practices in technology-supported learning activities was performed to identify the advanced training technologies that would be viable for the DOE. Organizations that would be appropriate for benchmarking the DOE were also identified. The needs assessment and best practices data were considered in the development

of business case alternatives and in the assumptions made in the analysis of benefits and costs. The industry best practices and benchmarking data also position the Department for future benchmarking efforts.

Two scenarios were considered for using technology-supported learning within the DOE. One scenario involves establishing a corporate approach for expanding the Department's existing technology-supported learning capabilities and for converting traditional lecture-based and self-study courses and materials into advanced training technology formats. The other scenario involves the continuation of the current non-corporate approach where organizational elements within the Department deliver education and training activities without the benefit of a corporate approach to technology-supported learning.

Within the corporate approach scenario four alternatives were developed and analyzed. The four corporate approach alternatives use different mixes of advanced training technologies. The non-corporate approach scenario has one alternative representing continuation of the Department's status quo. The analysis of benefits and costs indicated that each of the alternatives in the corporate approach scenario resulted in a return on investment from $60 million to $66 million, while the return on investment for the non-corporate approach scenario was $2 million.

The business case recommendations are the result of extensive research, data collection, and analysis. They position the Department to take full advantage of available resources and emerging technologies as they evolve. The following high-level recommendations are presented in this business case:

1. **Adopt a corporate approach to technology-supported learning** . A corporate approach versus a non-corporate approach (status quo) will produce 33 times greater net savings ($66 million as opposed to $2 million). A corporate approach will improve learning effectiveness; on-the-job performance; and the quality, standardization, and consistency of training; and increase the overall system efficiency through reduced redundancies and deceased learning time.

2. **Adopt a Multi-Technology Solution** , which will use a mix of existing technologies across the Department; i.e., interactive television (ITV), multimedia/computer-based training (MM/CBT), and high speed networks/Internet. The Department should build on these technologies over the next 5 years, integrating new technologies as they evolve. A $36.5 million investment over a 5-year period will provide for a $10 million capital equipment investment and a $26.5 million operating budget investment that includes course conversion and delivery costs.

3. **Establish and cultivate needed resources** to include external and internal partnering agreements, establishment of centers of excellence, in-house course conversion capabilities, and an approved list of vendor products and services.

The implementation of the business case recommendations will result in a $66 million return on investment over 5 years. The payback point will occur early in the second year. The

recommendations will enable the Department to achieve its ultimate goal of delivering just-in-time training to all Federal and contractor employees at their individual workstations.

The business case addresses what needs to be done to deliver cross-cutting education and training in a cost-effective and efficient manner using advanced training technologies. The business case results and recommendations will be presented to Training and Information Management executives for approval and funding. A project plan and the implementation of technology-supported learning are dependent upon funding.

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